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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,003	04/26/2001	Yukio Kohmura	204838US3CONT	7043

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EXAMINER

LOPEZ, CARLOS N

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 01/15/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,003

Applicant(s)

KOHMURA, YUKIO

Examiner

Carlos Lopez

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/26/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 2 is objected to because of the following informalities: at line 1, misspelling of the word vitrification. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1) Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if claim 1 is a Jepson claim. Do the elements following the phrase "characterized in that" constitute that portion of the claimed combination which the applicant considers as the new or improved portion?

In claim 1, "the gas feed discharge pipe" lacks antecedent basis.

Its unclear if "the gas feeding means" recited at the second to last line of claim 1 is the same as that recited in line 3 of claim 1 which feeds the furnace core tube. Is the

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feed branch connected to a different gas feeding means or to the gas feeding means supplying gas to the furnace core?

In claim 2, is the drain conduit connected to the gas feeding means of the furnace core tube or to the gas feeding means of a gas feed branch that is connected to the gas discharge pipe?

For Examination purposes, claim 1 is read as reciting a gas feed branch, having a gas feeding means, is connected to the middle of the gas discharge pipe connecting the furnace core and the suction pump wherein nitrogen or air is fed from the gas feeding means of the gas feed branch. Claim 2 is read as providing a drain conduit to said gas feed branch having a gas feeding means.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2) Claims 1 rejected under 35 U.S.C. 102(b) as being anticipated by Yoshikai (US 4,726,764). Yoshikai discloses a porous vitrification apparatus to minimize pressure fluctuation of the treatment gas in a furnace tube (Abstract). Yoshikai discloses a perform (1), a heating furnace (3) surrounding the furnace core tube (2), means for feeding a gas (8) to the furnace core (2), a discharge means (9), and a discharge controlling means (13). A feed branch pipe with control means (26A) is connected to the middle of the discharge means/discharge pipe (9) wherein air is fed to the gas feed

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branch from gas feeding means which is the air (Column 3, lines 20-32). As disclosed by Yoshikai, the flow rate of the feeding gas is maintained constant (Column 3, lines 33-49), therefore it is inherent that a feed rate controlling means would be present.

Yoshikai feeding means for the furnace core that feeds a gas is capable of feeding Helium gas as claimed by Applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3) Claim 5/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikai (US 4,726,764) as applied to claim 1 above and in further view of Habasaki et al (US 5,639,290). Claim 5, additionally recites a group of vitrification apparatuses having an exhaust suction pump provided for every porous preform and a common exhaust gas treatment device. As shown by figure 2 of Habasaki et al labeled as prior art, a plurality vitrification apparatuses operated in parallel is known and thus, at the time the invention was made it would have been obvious to a person of ordinary skill in the art to have arranged a plurality of vitrification apparatuses in parallel and provided an exhaust suction pump and a common exhaust treatment device since the claimed arrangement known in the art as evidenced by Habasaki.

Allowable Subject Matter

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Claims 2-4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: While the cited prior art provides means for minimizing the fluctuation of a treatment gas in a furnace by providing a gas feed pipe at the exhaust pipe of a furnace core tube the cited prior art does not disclose or reasonable suggest providing a drain conduit in the gas feed pipe as recited in claim 2. Additionally, the cited prior art does not disclose or reasonably suggest providing a mechanism for detecting a pressure difference between a pressure in a furnace core tube and a pressure in a heating furnace body and controlling the parameters set forth in claim 3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

CL 11/7/03